186884

high levels (percent)

Stop by to discuss

ACTION MEMORANDUM – RV4

DATE:

SUBJECT: Request for a Ceiling Increase for a Removal Action at the Cornell-Dubilier Electronics Site, South Plainfield, Middlesex County, New Jersey

FROM: James Kearns, On-Scene Coordinator
Removal Action Branch

TO: George Pavlou, Acting Director
Emergency and Remedial Response Division

THRU: Joseph Rotola, Chief
Removal Action Branch

Site ID #: GZ

Draft (comments 8/15/08

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of a ceiling increase for the proposed removal action described herein for the Cornell-Dubilier Electronics Site ("Site"), located at 333 Hamilton Boulevard, Middlesex County, New Jersey 07080. A 12-month exemption was previously approved as part of the June 28, 2004 Action Memorandum.

End of Section I

See Exempt 1

On August 20, 2007, the U.S. Environmental Protection Agency Removal Action Branch ("EPA-RAB") received a written request from the EPA New Jersey Remediation Branch ("EPA-NJRB") to conduct a removal action at the Site under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, (CERCLA), 42 U.S.C. §9601 et. seq.,. The request was generated as a result of finding capacitors in the Bound Brook stream corridor located adjacent to the southeast boundary of the Site. A copy of the NJRB request is included in Appendix 1. There are no nationally significant or precedent-setting issues associated with the response.

This Action Memorandum requests the authorization of $585,500 in Direct Extramural Funds, of which $425,000 is from the Regional Removal Advice of Allowance for mitigation contracting. If

CONCURRENCES									
NAME: Cornell-Dubilier Electronics INIT: sb Date: Filename:CD#000									
ERRD-RAB	ERRD-RAB	ERRD-RAB	ORC-NJ	ERRD-NJRB	ERRD-NJRB	ERRD-NJRB	ERRD-DD	ERRD-D	ERRD-SIT
Kearns	Harkay	Rotola	Flanagan	Mannino	Peterson	Prince	LaPadula	Pavlou	Basso

NEW YORK, NY 10007-1866

DATE: MAR - 7 2008

SUBJECT: Request for Action Ceiling Increase, 12-Month and $2 Million Exemption for the CERCLA Removal Action at the Tidewater Baling Site, Newark, Essex County, New Jersey

FROM: Donald R. Graham, On-Scene Coordinator
Removal Action Section

TO: Alan J. Steinberg
Regional Administrator

THRU: George Pavlou, Director
Emergency and Remedial Response Division

Site ID: 4N

I. PURPOSE

EXAMPLE 1

The purpose of this Action Memorandum is to request and document approval of the proposed removal action ceiling increase and 12-month and $2 million exemption as described herein for the Tidewater Baling Site ("Site"), located at 26 St. Charles Street in Newark, Essex County, New Jersey, 07105. This removal action addresses the excavation and off-site disposal of lead and polychlorinated biphenyl ("PCB") contaminated soils on the Site. This is the second removal action implemented by the Environmental Protection Agency ("EPA") at the Site. The first Action Memorandum, dated July 28, 1989, can be found in Appendix A.

This Action Memorandum requests the authorization of $3,462,348 in Direct Extramural Funds, of which $2,785,290 is from the Regional Removal Advice of Allowance for mitigation contracting. If approved, the total Direct Extramural project ceiling would be increased to $3,512,348, of which $2,835,290 would be for mitigation contracting. Conditions at the Site continue to meet the criteria for a removal action under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), and documented in Section 300.415(b)(2) of the National Contingency Plan ("NCP").

approved, the total Direct Extramural project ceiling would be increased to $1,010,500, of which $757,000 would be for mitigation contracting. Conditions at the Site continue to meet the criteria for a removal action under CERCLA, and documented in Section 300.415(b)(2) of the National Contingency Plan ("NCP").

II. SITE CONDITIONS AND BACKGROUND

The Comprehensive Environmental Response, Compensation and Liability Information System ID Number for the site is NJD981557879. The proposed removal action is considered time-critical. This is the fourth removal action by the EPA at the site.

Cornell-Dubilier Electronics, Inc. ("CDE") operated at the Site from 1936 to 1962, manufacturing electronic components including, in particular, capacitors. Many capacitors manufactured by CDE during this period contained polychlorinated biphenyl ("PCB") oil. These capacitors, foils and papers from inside capacitors, and PCB contaminated wood blocks from the facility floors were dumped in large numbers at the site and are know to contain high concentrations of PCBs. These disposal activities led to widespread chemical contamination at the facility, as well as migration of contaminants to nearby areas.

Occasional flooding events has caused erosion of a portion of the Bound Brook banks near the industrial park and erosion of the banks in the southern end of the Site that borders the wetlands. This erosion has enabled the release of capacitors, capacitor associated debris and PCB contaminated wood blocks to the Brook. The May 14, 2008, EPA-NJRB, EPA-RAB and EPA Removal Support Team, Weston Solutions, Inc. ("RST") test pit activities of the banks of the Site and visual inspection/documentation of suspected PCB contaminated materials performed by EPA-RAB and RST on July 8, 2008 have indentified the banks of the Bound Brook adjacent to the site property in the area of the culverts and up to ~140 downstream of the culverts, the island of soil between the culverts of the Bound Brook (a.k.a. tongue area), and the southern bank of the site that borders the wetlands as the locations where the PCB contaminated material is emanating from.

This removal action addresses erosion of the banks of the Bound Brook and migration of PCB contaminated debris from the banks of the Bound Brook in the area of the three (3) culverts and wetlands area located in the southern portion of the Site that have been found to contain the PCB contaminated debris. Results of sampling performed on XXXX by XXXXX of the oil contained inside a capacitor, foil used inside capacitors, and a stained wood block found at the Site indicated PCB concentrations of XXX mg/kg, XXXX mg/kg, and XXXX mg/kg, respectively.

A. Site Description

1. Removal site evaluation (RSE)

The May 14, and July 8, 2008 Surface Subsurface Investigations of the Banks and Wetlands of the Bound Brooks adjacent to the Site Island

On August 7, 1997 EPA collected additional soil, sediment, surface water, and biota samples along the Bound Brook adjacent to and downstream of the facility. Aroclor-1254 concentrations as high as 13 mg/kg (wet weight) and 6.2 mg/kg (wet weight) were measured in the sediment and floodplain soils, respectively. Copper, zinc, lead, and barium were detected in the soils and sediments, at concentrations up to 210 mg/kg, 620 mg/kg, 540 mg/kg, and 380 mg/kg (dry weight), respectively. ~~The~~ fish fillet samples ~~contained detections of~~ two PCBs and seven pesticides. Data collected during this sampling event, in conjunction with the June 1997 concentrations, were utilized to conduct an ecological risk assessment.

On August 8, 1997 the NJDEP issued an interim fish consumption advisory for Bound Brook and New Market Pond due to EPA findings of elevated PCB concentrations in sediments and fish samples.

On June 16 through 20 and 27, 1997, EPA initiated a study to determine the impacts of contamination of the Bound Brook to human health and the environment. Soil, sediment, water, and biota (fish, crayfish, and small mammals) samples were collected along Bound Brook adjacent to and downgradient of the Site. Samples of edible fish were collected from Bound Brook, New Market Pond, and Spring Lake for use in assessing human health risks. Results of the sampling are presented in the *Bound Brook Sampling and Edible Fish Tissue Data Report*, dated August 1997 (EPA, 1997a).

In August through December 1997, EPA-RAB collected surface and subsurface soil samples from the banks and sediment samples from the streambed of the Bound Brook. Nine sections (Reach 1 through 9), spanning approximately 2.4 miles of the Bound Brook, were investigated. Soil samples were collected from both sides of the stream, five feet and ten feet away from the waters edge, from two depth intervals, 0 to 6 inches and 18 to 24 inches. Sediment samples were collected from the center of the brook at similar depths. These samples were collected in transects every 50 feet in Reaches 1 through 4, every 100 to 200 feet in Reach 5, every 200 feet in Reaches 6 through 8, and every 50 feet in Reach 9. Table 1, presents the maximum total PCB concentrations detected for the soil samples collected from each Reach on both sides of the Bound Brook and from its sediments.

Table 1: Maximum PCB Concentrations (mg/kg) Detected in Samples Collected From the Bound Brook, EPA, 1997

	North Bank	South Bank	Sediment
Reach 1	6.7	85	0.32
Reach 2	8.1	27	22
Reach 3	39	830	21
Reach 4	4.6	250	1.6
Reach 5	180	110	39
Reach 6	470	220	13.6
Reach 7	28	24	25
Reach 8	15	7.1	22
Reach 9	0.2	0.17	0.12

From August 1997 through December 1997, EPA conducted sampling along the Bound Brook floodplain, collecting surface and subsurface soils from the banks and sediments from the streambed. As described in the *Soil and Sediment Sampling and Analysis Summary Report,* dated September 8, 1998, one hundred transects were established along approximately 2.4 miles of the brook, with transects located upstream, midstream, and downstream of the site. Four of the transects were located downstream of the New Market Pond spillway. Mean total PCB concentrations were 7.59 mg/kg for the surface soils; 11.97 mg/kg for the subsurface soils; 2.93 mg/kg for the surface sediments; and 2.34 mg/kg for the subsurface sediments.

In October and November 1997, EPA collected soil and indoor dust samples from residential properties on Spicer Avenue, near the facility property. EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the data obtained from this sampling and concluded that exposure to PCBs in dust and soil posed a potential health concern for residents at several of the properties tested. To limit the potential for exposure to PCBs until a final remedy could be selected, EPA initiated another removal action to clean the interiors of seven homes on Spicer Avenue, Garibaldi Avenue, and Hamilton Boulevard. EPA performed interior cleaning on seven properties, and entered into an Administrative Order on Consent (AOC) with D.S.C. Enterprises of Newark, Inc. ("DSC") and CDE for removal of contaminated soil from six properties.

In 1997 the EPA Environmental Response Team ("EPA-ERT") performed an ecological evaluation of the Bound Brook. These investigations identified elevated levels of PCBs in fish and sediments of the Bound Brook. Maximum PCB concentrations (Aroclor-1254) identified in crayfish, forage fish, and edible fish was 2.4 mg/kg, 20 mg/kg, and 42 mg/kg, respectively. As a result of these investigations, NJDEP issued a fish consumption advisory for the Bound Brook and its tributaries, including nearby New Market Pond and Spring Lake.

On November 21, 1998, EPA re-sampled soils at the following Bound Brook transect locations:

shallow

CCSD1 (Transect CC), DDSS1 (Transect DD), HHSD1 (Transect HH), PPPND2 (Transect PPP), and UUUSD1 (Transect UUU). One surface soil sample and four subsurface soil samples were collected and analyzed for PCBs, as described in the Soil and Sediment Sampling and Analysis Summary Report, Addendum No. 1, dated March 3, 1999. Results indicated Aroclor-1254 at ~~detected~~ concentrations ranging from 1.2 mg/kg to 580 mg/kg. These results revised the mean total PCB concentrations for surface (from 7.59 to 6.88 mg/kg) and subsurface (from 11.97 to 12.28 mg/kg) soils.

From June 21 through 23, 1999, additional samples from the Bound Brook floodplain, downstream of Spring Lake, were collected by EPA and analyzed for PCBs. Four areas were sampled: Area 1 (Veteran's Memorial Park), Area 2 (north side of Cedar Brook, between Lowden and Oakmoor Avenues), Area 3 (north side of Bound Brook, in the vicinity of Fred Allen Drive), and Area 4 (located adjacent to stream 14-14-2-3 as identified on the Flood Insurance Map for the Township of Piscataway, south of New Market Avenue and east of Highland Avenue). The investigation results are presented in the *Floodplain Soil/Sediment Sampling and Analysis Summary Report*, dated January 2000. Area 1 samples had total PCB concentrations ranging from non-detect to 25 mg/kg; Area 2 samples had total PCB concentrations ranging from 0.060 mg/kg to 2.0 mg/kg; Area 3 samples had total PCB concentrations ranging from 2.5 mg/kg to 7.5 mg/kg; and Area 4 samples had total PCB concentrations ranging from non-detect to 0.21 mg/kg.

In 2000, EPA initiated the Remedial Investigation (RI) for the Site and began collecting soil samples from properties further away from the CDE facility. This sampling revealed additional properties with PCBs in soil at unacceptable levels, and indicated a need for more extensive sampling. EPA compiled the 1997 and 1998 removal sampling data with its remedial investigation data in a Remedial Investigation Report for OU-1, and in June 2003 proposed a comprehensive remedy for OU-1, the contaminated properties in the vicinity of the former CDE facility.

In the vicinity of the Site

Following the observance of capacitors in the Bound Brook in May 2007, EPA has performed monitoring of the Bound Brook ~~drainage area~~ on a weekly basis to determine the presence and impact that PCB contaminated capacitors are posing on the Bound Brook. Periodic inspections of the Bound Brook ~~adjacent to the former CDE facility have~~ identified an occasional capacitor. Capacitor and capacitor parts discovered during these inspections have been collected and secured in drums at the Site for future disposal. These capacitors, most of which are relatively small in size, typically have extremely high concentrations of PCBs. These capacitors are believed to have been displaced due to erosion in the area of the three culverts that support the railway that had historically provided rail access to the CDE facility and the tongue area located between the culverts.

fall 2000 era

data ?

WAS conducted

In December 2007 through January 2008, EPA-RAB re-created a portion of the sampling event that ~~took~~ place in the Bound Brook corridor in 1997. During this effort, Reaches 1 through 4 were sampled; an area that spans from approximately the upstream wetland bound by Spicer Avenue through to Lakeview Avenue. The analytical results indicate that Reaches 2 and 3 contained ~~the most~~ elevated PCB ~~levels in the vicinity of the Site~~. Reach 2 spans the area between the three

Concentrations of

culverts in the southeast corner of the Site to the first culvert under the Conrail tracks. Reach 3 covers the next downstream area up to the second culvert under the Conrail tracks. Results indicate that PCB concentrations have increased in some areas of the Bound Brook. EPA's observations of occasional capacitors on the banks of the Brook and review of recent sediment analytical data warrants further action by EPA.

The maximum PCB concentrations, identified as Aroclor-1254, detected in Reach 2 were 180 mg/kg on both the north and south banks, and 190 mg/kg in the sediments. The areas of highest concentrations in Reach 2 were just downstream of the culverts. The maximum PCB concentrations, identified as Aroclor-1254, detected in Reach 3 were 650 mg/kg in the north bank, 500 mg/kg in the south bank, and 62 mg/kg in the sediment. Most of the transects in Reach 3 contained sample locations with PCB detections above 100 mg/kg.

On May 14, 2008, EPA-NJRB, EPA-RAB and personnel from the RST contract performed several test pits along the perimeter of the site to further investigate the contents of the bank of the Brook and bank of the southern perimeter of the Site that is adjacent to a wetlands area. The test pit activities identified capacitors in soils near the culverts of the Brook (Test Pit #2) in the southeastern portion of the site. Plastic film used in micro-capacitors was observed in soils obtained from Test Pits #6 and #7 located in the southern portion of the Site property near the wetlands area. A copy of the Trip Report for the event is included as Appendix III.

On July 8, 2008, a visual inspection of Reach 1 of the Bound Brook and the Wetlands Area was performed by EPA-RAB and RST. During the inspection, capacitors, capacitor debris, and stained wooden blocks were identified, documented, photo-documented, collected, staged on site, and GPS coordinates of the location where the item was collected were recorded. Capacitor parts were located in Reach 1 in the area of the culverts beneath the railway overpass and in the south and southeast banks of site that borders the wetlands area. A capacitor was collected from approximately 60 feet upstream of the culverts along the southern portion of the site prior to the wetlands area. A copy of the report and a Map depicting the locations where the capacitor and capacitor debris were located is included as Appendix IV.

A review of an historical areal photo dated October 20, 1947, indicates the area of the 3 culverts included fill material from the CDE facility. The backfill used during the construction of these additional culverts appears to have been obtained from the landfilling activities that occurred during CDE operations and contained capacitors, capacitor parts, and PCB contaminated wood blocks. In addition, a comparison of an areal photo collected on May 7, 1963 (photo collected during construction of two (2) additional culverts (installed adjacent to the one pre-existing culvert) and an areal photo collected on March 9, 1991 indicated significant erosion of the soil mound (a.k.a. tongue area) between the pre-existing culvert and two new culverts installed in 1963 had occurred. It is believed that this erosion continues today, consistently exposing additional capacitors and capacitor parts. These three (3) culverts are still present today in same location as in 1963 in the Bound Brook immediately adjacent to the southeastern portion of the Site.

EPA's observations of occasional capacitors on the banks of the Brook, results of recent sediment analytical data, test pit activities performed by EPA-NJRB, EPA-RAB and RST on May 14, 2008, visual inspection and documentation performed by EPA-RAB in July 2008 and review of historical areal photos indicates further action by EPA is warranted.

A CERCLA removal action is warranted at the Site to address the potential threats posed by the continued presence and release of capacitors and associated parts, and contaminated wood blocks containing elevated concentrations of PCBs from the banks of the Brook in the vicinity of the culverts and upstream wetlands.

2. Physical location

The Site is located at 333 Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey. It occupies approximately 26 acres in an industrial/commercial/residential area and is bordered by commercial businesses and residences to the south, west, and northwest. Wetlands and an unnamed tributary to the Bound Brook border the Site to the southeast and east. Conrail railroad tracks pass alongside the eastern edge of the Site and crisscross the unnamed tributary just north of the Site. Other industries and commercial businesses are present to the northeast and east of the Site on the opposite side of the Conrail tracks. An estimated 540 persons reside within 0.25 miles of the Site, with the nearest residential homes being located on Spicer Avenue and on the opposite side of Hamilton Boulevard, less than 200 feet from the Site. The total population estimated to live within one mile of the Site is 8,700 persons. A Site Map is included as Appendix 1.

The unnamed tributary flows into the Bound Brook approximately 0.75 miles downstream of the Site. The Bound Brook flows for 1.5 miles before emptying into New Market Pond. Surface water flow from New Market Pond travels approximately 8.5 miles before discharging into the Raritan River. The dam on the western edge of New Market Pond is reportedly impassible to most fish. Spring Lake is located upstream from the Site and is related with Cedar Brook. Both of these water bodies support secondary contact recreation including boating and fishing. All of the above-mentioned water bodies are designated by the State of New Jersey for the maintenance, migration, and propagation of the natural and established biota. These water bodies are utilized as freshwater fisheries. A fish consumption advisory has been posted for the area between the Site and New Market Pond. Wetlands that border the Site to the southeast diminish significantly as the Bound Brook heads downstream towards the northwest. The width of the stream in the vicinity of the Site varies from 10 to 20 feet, with a varying depth during normal conditions, of one to four feet. Ground water is a significant source of drinking water within a four-mile radius of the Site. The majority of people within this radius are served by drinking water from either the Middlesex Water Company (MWC) or the Elizabethtown Water Company (EWC), both of which utilize supply wells within four miles of the Site.

3. Site characteristics

This ~~planned~~ Removal Action is the fourth EPA Fund lead Removal action for the Site. There have also been ~~four~~ (4) ~~Possible~~ Responsible Party ("PRP") removals for the site, ~~but only three were~~ completed by the PRPs.

Prior to 1936, Spicer Manufacturing Corp., a predecessor to Dana Corporation, owned and operated the facility, and many of the buildings date from this era. Spicer Manufacturing Corp. ceased operations in South Plainfield in 1929 and, beginning in 1936, leased the property to CDE. CDE operated at the facility from 1936 to 1962, manufacturing electronic components including, in particular, capacitors. PCBs and chlorinated organic solvents were used in the manufacturing process, and the company disposed of PCB-contaminated materials and other hazardous substances directly on the facility property. In addition, it is reported that CDE tested transformer oils for an unknown period of time until they vacated the Site. CDE's activities led to widespread chemical contamination at the facility, as well as migration of contaminants to areas nearby the facility.

PCBs have been detected in the groundwater, soils and in building interiors at the industrial park, at adjacent residential, commercial, and municipal properties, and in the surface water and sediments of the Bound Brook. High levels of VOCs have been found in the facility soils and in groundwater. Following CDE's departure from the facility in 1962, it was operated as a rental property, with over 100 commercial and industrial companies operating at the facility as tenants. Some of these tenants may have contributed to some Site contamination, but the PCB and VOC contamination appears to be primarily attributable to CDE's operation. In May 2008, EPA completed the demolition of the 18 contaminated buildings at the former CDE facility. The buildings were contaminated with PCBs and metals, such as arsenic, chromium, mercury, and lead. Approximately, 26,400 tons of building debris was transported off-site to CERCLA approved landfills. The owner of the property is D.S.C. Enterprises of Newark, Inc. ("DSC").

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

The following hazardous materials and/or substances have been identified at the Site:

Substances Identified	Statutory Source for Designation as a Hazardous Substance
Furan	RCRA 3001
2,3,7,8-TCDD (dioxin)	CWA 307(a)
3,3',4,4'-tetrachlorobiphenyl (dioxin congener)	
polychlorinated biphenyls (PCBs)	CWA 311(b) (4), & CWA 307(a)

In the statutory sources cited above, CWA 307(a) indicates that the source is Section 307 (a) of the Clean Water Act, CWA 311(b)(4) indicates that the source is Section 311(b)(4) of the Clean Water Act, and RCRA 3001 indicates that the source is Section 3001 of RCRA.

PCBs are the most prevalent contaminants found on the property, and are present as a result of former CDE facility activities. Surface and subsurface soil sample analytical results indicated the presence of PCB compounds in almost all of the samples collected. Four individual Aroclors (-1242, -1248, -1254, and -1260) were detected at the property.

Polychlorinated biphenyls are a group of 209 different chemicals which share a common structure but vary in the number of attached chlorine atoms. The International Agency for Research on Cancer and the EPA classify PCBs as a probable human carcinogen. The National Toxicology Program has concluded that PCBs are reasonably likely to cause cancer in humans. The National Institute for Occupational Safety and Health has determined that PCBs are a potential occupational carcinogen. Studies of PCBs in humans have found increased rates of melanomas, liver cancer, gall bladder cancer, biliary tract cancer, gastrointestinal tract cancer, and brain cancer, and may be linked to breast cancer. PCBs are known to cause a variety of types of cancer in rats, mice, and other study animals.

Once PCBs enter a person's (or animal's) body, they tend to be absorbed into fat tissue and remain there. Unlike water-soluble chemicals, they are not excreted, so the body accumulates PCBs over years. This means that PCBs also accumulate via the food chain: a small fish may absorb PCBs in water or by eating plankton, and these PCBs are stored in its body fat. When a larger fish eats the small fish, it also eats and absorbs all the PCBs that have built up in the small fish. In this way, larger fish and animals can build up a highly concentrated store of PCBs. Some types of PCBs may degrade into nontoxic form while they are stored in the body, but this process can take many years.

People exposed directly to high levels of PCBs, either via the skin, by consumption, or in the air, have experienced irritation of the nose and lungs, skin irritations such as severe acne (chloracne) and rashes, and eye problems. Women exposed to PCBs before or during pregnancy can give birth to children with significant neurological and motor control problems, including lowered IQ and poor short-term memory.

PCBs with only a few chlorine atoms can mimic the body's natural hormones, especially estrogen. Women who consumed PCB-contaminated fish from Lake Ontario were found to have shortened menstrual cycles. PCBs are also thought to play a role in reduced sperm counts, altered sex organs, premature puberty, and changed sex ratios of children. More highly-chlorinated PCBs (with more chlorine atoms) act like dioxins in altering the metabolism of sex steroids in the body, changing the normal levels of estrogens and testosterone. PCBs tend to change in the body and in the environment from more highly-chlorinated to lower-chlorinated forms, increasing their estrogenic effects.

Because of the high concentrations of PCBs present in the soils in the southeastern portion of the Site, a limited number of surface and subsurface soil samples underwent PCB congener analysis. There are 209 congeners of PCBs. Individual congeners can have a toxicity similar to dioxin and, if present in sufficient concentrations, can pose a risk higher than the PCB congeners that lack the

chemical properties of dioxin. This analysis revealed 3,3',4,4'-tetrachlorobiphenyl, a dioxin-like congener, at a maximum concentration of 2,200 ppm.

As reported in the September 2004 EPA Record of Decision ("ROD") for Operable Unit 2 ("OU-2"), test pit excavations unearthed capacitors that appeared corroded and/or partially burned. In addition, during excavation of test pits, white and blue crystalline powder, electrical components, and other materials were unearthed.

Due to the presence of charred debris in the test pits and the fact that burning PCBs can result in the generation of dioxins and dibenzofurans, a highly toxic group of contaminants, a limited set of soil samples were subjected to dioxin and furan analysis. Although analyzed in only a few surface and subsurface soil samples during the Remedial Investigation for OU-2, dioxins and furans were detected.

Individual dioxin/furan constituents ranged up to 13.5 parts per billion ("ppb"). The maximum concentrations for the dioxin/furan homologs (i.e., compounds with an equal number of chlorine substitutions) was 52.8 ppb. These hazardous substances are acutely and chronically toxic, and carcinogenic. The potential health effects from some of these compounds are skin disorder such as chloracne, liver problems, and impairment of the immune system, endocrine system, and reproductive functions, effects on the developing nervous system and other developmental events, and development of certain types of cancers.

The environmental effects posed by these materials include potential airborne release and the potential for migration of contamination in the surface water and groundwater. Numerous events could trigger releases; the primary concerns include, destabilization of the banks of the Bound Brook, banks erosion, migration of soils/PCB contaminated wood blocks/and PCB contaminated paper film used in capacitors from flooding in the wetlands area, seepage of PCB contaminated perched groundwater containing PCBs from the overburden into the Bound Brook, and direct contact via stream access.

5. NPL status

The site was listed on the National Priority List (NPL) in July 1998. Remedial activities are currently in progress. However, EPA has indicated that the investigation activities for the Bound Brook banks and sediments, and remediation of the wetlands area is not scheduled to be initiated for a minimum of 2-3 years.

6. Maps, pictures, and other graphic representations 1 2 3

Include figures shown

Attachment 1, ~~presents~~ the general location and layout of the Site.

B. Other Actions to Date

1. Previous actions

On August 5, 1997 the EPA ERRD Director granted verbal authorization of $10,000 for the fabrication and installation of signs warning anglers not to eat fish taken from waters of the Bound Brook.

On March 26, 1998, the EPA ERRD Director granted verbal authorization of $150,000 for the removal and disposal of PCB contaminated dust from the interiors of 7 homes located near the site.

On September 23, 1998 an Action Memorandum that documented verbal authorization from the Director of ERRD on August 5, 1997 of $10,000; documented verbal authorization from the Director of ERRD on March 26, 1998 for an additional $150,000; and request for ceiling increase of $265,000, to increase the ceiling to a total of $425,000, and exemption from the 12-month statutory limitation for performance of removal activities. These activities included the removal and disposal of PCB contaminated dust from the interiors of 8 additional homes located near the site.

State confirm that 3RP actions were done.

On August 6, 1998, CDE and DSC entered into an Administrative Order on Consent ("AOC") (Index No. - II-CERCLA-98-0115) for a removal action that included the removal and disposal of contaminated soil from five (5) residential properties, and delineation of the vertical and horizontal extent of PCB contamination in soil above 1 mg/kg at one (1) additional property. The work was completed by CDE and DSC on September 16, 1999.

On August 8, 1998, NJDEP issued a final fish consumption advisory. The advisory included all parts of the Bound Brook and its tributaries, New Market Pond and Spring Lake.

On August 15, 2001, an Action Memorandum requesting a removal re-start and exemption from the 12-month statutory limitation was approved. This action involved the removal and disposal of contaminated soil from the residential property located at 126 Spicer Avenue and restoration of the property to pre-removal conditions. The estimated cost of the work was $119,403 of which $72,806 was for mitigation contracting. Costs associated with this action were not expected to exceed the costs ($425,000 total ceiling) previously authorized in the Action Memorandum for the site dated September 23, 1998 and therefore no ceiling increase was requested.

On June 28, 2004, an Action Memorandum requesting a change in scope, ceiling increase and 12-month exemption was approved. The action involved the removal and disposal of contaminated soil from the residential property located at 126 Spicer Avenue in South Plainfield and restoration of the property to condition similar to those prior to the removal action. The estimated cost of the work was $203,118 of which $148,121 is for mitigation contracting. The new mitigation contracting ceiling was $394,622 and the total project ceiling was $460,100.

In January 2008, EPA installed 8 additional groundwater monitoring wells in the vicinity of the former CDE facility. Initial sampling revealed elevated levels of TCE in the groundwater.

In May 2008, EPA completed the demolition of the 18 contaminated buildings at the former CDE facility under EPA ROD OU-2. The buildings were contaminated with PCBs and metals, such as arsenic, chromium, mercury, and lead. Approximately, 26,400 tons of building debris was transported off-site to a CERCLA approved disposal facility.

In June 2008, EPA ROD OU-2, EPA completed excavating approximately 21,000 tons of PCB contaminated capacitor debris and soils from an area in the undeveloped portion of the facility, identified as the main capacitor disposal area. The area formerly covered by the buildings has been temporarily paved with asphalt to minimize contact and potential for release. Excavation and backfilling of a portion of the former main capacitor disposal area was completed in June 2008. All of the waste was shipped offsite to a CERCLA approved disposal facility.

2. Current actions

Periodic inspections of the Bound Brook adjacent to the former CDE facility have identified an occasional capacitor. These capacitors are believed to have been displaced due to erosion. A review of historical areal photos indicates there has been significant erosion of the banks of the Bound Brook directly downstream of the culverts (total of 3 culverts located adjacent to one another) located at the southeastern boundary of the site. A review of historical aerial photos also indicates that initially there was 1 culvert and during the time period of CDE operations 2 additional culverts were installed immediately west of the existing culvert. The backfill used during the construction of these additional culverts appears to have been obtained from the capacitors and capacitor parts landfilling activities that occurred during CDE operations.

On May 14, 2008, in an effort to identify the soil types along the banks of the Bound Brook and wetlands areas bordering the site to the southeast and south, respectively, and to confirm locations of landfill material containing capacitors/capacitor debris, the EPA-RAB with the assistance of the EPA-NJRB, performed 8 test pits. Results of the test pit activities revealed capacitors at Test Pit 2 (near culverts of the bound Brook in Reach 1). In addition, test pits 6 and 7 located adjacent to the wetlands area to the south of the site contained plastic foil/film used in microcapacitors and microcapacitor parts. A report documenting the results of the test pit activities was generated by RST dated June 9, 2008. Wood blocks used as flooring at the facility were also observed in test pit 7. A copy of the report is included as Appendix IV.

On July 8, 2008, a visual inspection of Reach 1 of the Bound Brook and the Wetlands Area was performed by EPA RAB and RST. During the inspection, capacitors, capacitor debris, and stained wooden blocks were identified, documented, photo-documented, collected, staged on site, and GPS coordinates of the location where the item was collected were recorded. Capacitor parts were located in Reach 1 in the area of the culverts beneath the railway overpass and in the south and southeast banks of site that borders the wetlands area. A capacitor was collected from approximately 60 feet upstream of the culverts along the southern portion of the site prior to the wetlands area. A Copy of the report and a Map depicting the locations where the capacitor and capacitor debris were located is included as Appendix V.

During the next 3 to 4 months, EPA-RAB will task REAC and RST contractors to re-evaluate an ecological risk assessment that was conducted in 1997-1998 for the Bound Brook corridor adjacent to the CDE site. This assessment will focus on the collection of tissue samples from fin fish to determine the presence and concentration of PCBs.

EPA-NJRB is in the process of completing the remedial design to address the remaining contaminated soils at the industrial park. Pursuant to the September 2004 ROD for OU-2, these soils will be excavated and treated on-site by low temperature thermal desorption (LTTD). The remedial design provides specifications that must be sustained throughout the construction activities. The remedial design for this portion of the cleanup is anticipated to be completed within the next several months.

However, remediation investigation activities for the Bound Brook banks and sediments, and wetlands area located to the south of the site are not included in the scope of work for the LTTD activities. According to the EPA, the investigation activities for the Bound Brook banks and sediments, and remediation of the wetlands area is tentatively planned to be initiated in 2-3 years.

Therefore, armoring of the stream banks and bank of the wetlands area in the southern portion of the Site for stabilization of fill material containing capacitors, capacitor parts, and PCB contaminated wood blocks, is required as an interim measure to prevent further erosion of the Bound Brook and securing of the capacitor waste to prevent human contact and further migration.

e. **State and Local Authorities' Roles**

1. State and local actions to date

On September 11, 1986 NJDEP conducted a Site Inspection and collected three surface soil, two surface water, and two sediment samples at the facility property. Exact sample locations are not available. Several metals, VOCs, and Aroclor-1254 were detected in the soil and sediment samples. Information on the investigation event is presented in the Site Inspection Report, dated 12 September 1986, and the Data Validation Review Memorandum, dated 13 April 1987.

On July 7, 1994, NJDEP entered into a Memorandum of Agreement with DSC to conduct remedial activities associated with Norpak Corporation fuel oil release. NJDEP referred the Site to EPA for CERCLA removal action on April 3,1997.

In June 1994, at the request of the NJDEP, EPA collected six surface soil, four sediment, and four surface water samples from the facility property during a Site Inspection sampling event. Results of the sampling are summarized in the Site Inspection Prioritization Evaluation Report, dated 23 January 1995. VOCs, semi- SVOCs, Aroclor-1254, and various metals were detected in soils at concentrations significantly exceeding background levels. Aroclor-1254, TCE, 1,2-dichloroethene (1,2-DCE), and lead were detected in a sediment sample from Bound Brook near the rear of the

property. In addition, elevated concentrations of polycyclic aromatic hydrocarbons (PAHs, a class of SVOCs), Aroclor-1254, lead and zinc were present in the sediment collected near the outfall pipe. Aroclor-1254, Aroclor-1248, 1,2-DCE, and various metals were also detected at elevated concentrations in surface water samples from Bound Brook.

In June 1996, at the NJDEP requested EPA-RAB to collect and analyze additional soil, surface water and sediments at the facility. The results of the sample analyses revealed that elevated levels of PCBs, VOCs, and inorganics were present at the Site. Contaminants identified in the 1996 EPA sediment sampling of stream sediments adjacent to the Site included cadmium, copper, lead, PAHs, and PCBs.

There have been no State or local removal actions taken at the site. The New Jersey Department of Health and Human Services ("NJDHSS") is providing health consultations to the EPA through the Agency of Toxic Substances and Disease Registry ("ATSDR"). Based on the results of EPA's sampling, the NJDEP issued a fish consumption advisory for the Bound Brook and its tributaries including Newmarket Pond and Spring Lake.

2. Potential for continued State/local response

~~It is anticipated that the~~ The NJDHSS will continue to provide technical assistance to the EPA concerning health issues at the Site. ~~At this time, it is not anticipated that there will be any future state or local actions taken at the~~ Site. NJDEP to maintain the fish advisory

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Hazardous substances, pollutants or contaminants present at the Site represent a threat to the public health and welfare as defined by Section 300.415(b)(2) of the NCP, in that there is a high potential for releases to continue to occur due to erosion of the unnamed tributary in the area of the culverts. Factors that supported conducting the removal action at the Site include:

A. Threats to Public Health or Welfare

Conditions at the Site meet the requirements of Section 300.415(b) of the NCP for the undertaking of a CERCLA removal action. Factors from the NCP Section 300.415(b)(2) that support conducting a removal action at the site are discussed below.

(i) Actual or potential exposure to nearby human populations or the food chain from hazardous substances, or pollutants, or contaminants [300.415(b)(2)(i)]

CERCLA hazardous substances have been identified in the soils and sediments in the Bound Brook corridor near the Site. There is evidence that persons are accessing this area near the Site. While someone entering the area could potentially be exposed to elevated levels of PCBs and other

CERCLA hazardous substances associated with the Site, the frequency and duration of this exposure is not known. Potential exposure pathways include incidental soil ingestion, dust inhalation, and dermal contact.

Based on the results of the ecological evaluation conducted in 1998, PCBs have been detected in the fish along the Bound Brook corridor from the Site downstream to New Market Pond. Although a fish consumption advisory has been issued and warning signs are posted along the Bound Brook, it is reported that persons in the area continue to fish the area for consumption purposes. Consumption of fish that contain PCBs at the levels previously identified in 1998 poses a potential human health threat. It is reported that subsistence fishing does occur in these areas.

Results of sampling performed on XXXX by XXXXX of the oil contained inside a capacitor, foil used inside capacitors, and a stained wood block found at the Site indicated PCB concentrations of XXX mg/kg, XXXX mg/kg, and XXXX mg/kg, respectively. PCB contaminated foil and wood blocks have the ability to float. Periods of high water levels in the Bound Brook provide opportunity for erosion of the banks and migration of the PCB contaminated materials.

PCBs are readily absorbed into the body by all routes of exposure. They may persist in tissues for years after exposure stops. Long-term exposure to PCBs can affect the skin and liver. PCBs may impair the function of the immune system and at high levels have been shown to produce cancer and birth defects in laboratory animals. Although PCBs are suspected as a human carcinogen, they have a very low potential for producing acute toxic effects. PCBs bioaccumulate to concentrations that are toxic. A number of human studies indicate that PCBs can cross the placenta and locate in the fetus. PCBs also concentrate in human breast milk.

(ii) Hazardous substances or pollutants or contaminates in drums, barrels, tanks or other bulk storage containers, that pose a threat of release largely at or near the surface, that may migrate [300.415(b)(2)(iii)]

As the Bound Brook further erodes the portion of the Site adjacent to it, additional capacitors could potentially be released, or their contents released, into the Bound Brook and migrate further downstream.

(iii) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate (40 CFR §300.415(b)(2)(iv)).

PCB concentrations at least 223 See ESE

Elevated levels of PCBs have been identified in the Bound Brook Corridor. The contaminated soils adjacent to the Site are readily available to migrate. During significant rain events, elevated flow rates and flash floods could potentially cause the PCB contamination to be spread downstream and into the floodplain.

(iv) Weather conditions that may cause hazardous substances, or pollutants, or contaminants to migrate or be released [300.415(b0(2)(v)]

Since stormwater runoff is a major source of flow in the Bound Brook Corridor, heavy or sustained rainfall events result in considerable water movement through the area. This facilitates the transport of PCB-contaminated soil and/or capacitors. Capacitors that are present at the surface on the southern end of the Site, upstream of the culverts, and in the banks of the Bound Brook near the Site downstream of the three culverts, could be unearthed and migrate downstream. This disturbance and movement, depending on the manner in which it occurs, could potentially agitate capacitors present near the surface which have been degrading for nearly a half century and result in a release of PCBs directly into the Bound Brook or the floodplain adjacent to it.

B. Threats to the Environment

In 1997 ~~the REAC contractor for~~ EPA-ERT performed an ecological evaluation of the Bound Brook. These investigations identified elevated levels of PCBs in fish and sediments of the Bound Brook. Maximum PCB concentrations (Aroclor-1254) identified in crayfish, forage fish, and edible fish was 2.4 mg/kg, 20 mg/kg, and 42 mg/kg, respectively. As a result of these investigations, NJDEP issued a fish consumption advisory for the Bound Brook and its tributaries, including nearby New Market Pond and Spring Lake.

In December 2007, ~~RST contract~~or and EPA-RAB collected additional sediment samples in the Bound Brook adjacent to the former CDE facility. Results indicate that PCB concentrations have increased in some areas of the Bound Brook.

All of the materials listed above are CERCLA designated hazardous substances as defined in 40 CFR Table 302.4. The Site is defined as a facility under section 101(9) of CERCLA, 42 U.S.C. § 9601(9). The hazardous substances at the Site constitute a "release," as defined in Section 101(22) of CERCLA, 42 U.S.C. Section § 9601(22).

Since May of 2007 periodic inspections have been conducted along the Bound Brook near the Site. Capacitor and capacitor parts discovered during these inspections have been collected and secured in drums at the Site for future disposal. These capacitors, most of which are relatively small in size, have extremely elevated levels of PCBs within them. Erosion of the banks of the Bound Brook is believed to be the cause of capacitors being found.

The Bound Brook is a low-gradient stream that has been documented through fishery surveys to contain spottail shiner, silvery minnow, white sucker, tessellated darter, American eel, largemouth bass, redfin pickerel, rock bass, catfish, carp, and sunfish. Mammalian species reportedly observed in the Bound Brook Corridor include red fox, domestic dog, muskrat, groundhog, white-tail deer, eastern gray squirrel, eastern cottontail, white-footed mice, eastern chipmunk, rat, raccoon, and opossum. Although not documented to be present near the Site, piscivorous mammals such as mink and river otter may occur within the Bound Brook Corridor. Avian species reportedly identified within the Bound Brook Corridor include red-tailed hawk, belted kingfisher, great blue heron, green heron, Canada goose, song sparrow, American goldfinch, domestic pigeon, barn swallow, hairy

300.415 (b)(2)(v) Weeds
300.415 (b)(2)(i) Food Chain

woodpecker, yellow warbler, common yellowthroat, northern oriole, killdeer, house wren, American robin, and great-crested flycatcher.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances at and from the Site, if not addressed by the response action selected in this Action Memorandum, would have presented an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

Since 2007 periodic inspections have been conducted along the Bound Brook near the Site. Capacitors, capacitor parts, and PCB contaminated wood blocks discovered during these inspections have been collected and secured in drums at the Site for future disposal. This debris has extremely high levels of PCBs.

~~As the remediation investigation activities for the Bound Brook banks to the east and wetlands area located to the south of the site are tentatively planned to be initiated in 2-3 years, stabilization of the perimeter of the Site is proposed as an interim measure to contain and prevent~~ migration of PCB contaminated debris until ~~the final remedial approach~~ for these areas is ~~selected and~~ implemented ~~by EPA~~. Geotextile will be installed to contain the capacitors, capacitor debris and PCB contaminated wood blocks until the permanent remedial action is implemented. The barrier will be installed immediately adjacent to the Site property in Reach 1 near the railway overpass and three culverts and for approximately 140 feet downstream of the culverts in the tongue area and north bank of the Brook, and upstream of the culverts along the southern bank of the site that borders the wetlands area. A total of approximately 15,000 to 20,000 ft^2 of area will be cleared of vegetation, and covered with geotextile fabric and rip-rap in an effort to armor the banks of the Site. The barrier will contain contaminated stream bank soil, capacitors, capacitor parts, and PCB contaminated wooden blocks while allowing surface water runoff and groundwater to continue feeding the stream.

Capping provides containment of contaminants, thereby reducing human health and ecological risk, and mitigating transport mechanisms between media. Locations to be capped have been selected based on hot spots that were identified by the EPA-RAB/EPA-NJRB/RST test pit investigation performed on May 14, 2008 and EPA-RAB/RST site investigation activities performed on July 8, 2008.

2. Contribution to remedial performance

DOT-approved shipping containers, and sent off-Site for disposal at a facility in compliance with EPA's Off-Site Disposal Policy. EPA is anticipating the generation of over 2,000 cubic yards of asbestos waste, PCB-debris, and contaminated wooden flooring.

- Upon completion of the cleanup, the Site will be secured and the appropriate City authorities will be notified of the completion of the cleanup.

EPA does not anticipate the need for post-removal site controls (PRSC) at the completion of the project. If PRSC are required, EPA will coordinate the need for PRSC with the NYSDEC or the City of Buffalo.

2. Contribution to remedial performance

The Site is not presently on the NPL. The response measures proposed in this Action Memorandum will address the removal of hazardous substances within the site buildings. The proposed action will contribute to any long-term remedial action with respect to the release or threatened release of hazardous substances at the Site.

3. Description of alternative technologies

Alternative technologies were not considered for the proposed actions. The asbestos abatement and removal of PCB debris will be addressed via traditional construction and removal methods.

4. Engineering Evaluation/Cost Analysis (EE/CA)

Due to the time critical nature of this removal action, an EE/CA will not be prepared.

5. Applicable and Relevant and Appropriate Requirements (ARARs)

ARARs that are within the scope of this removal action will be met to the extent practicable, considering the exigencies. Federal ARARs determined to be applicable for the proposed scope of work include the Occupational Safety and Health Act, Asbestos Hazard Emergency Response Act, and the Toxic Substance Control Act.

6. Project schedule

The removal action proposed in this Action Memorandum will take six to nine months to complete. Work at the Site will begin immediately upon receipt of funding.

VI. PROPOSED ACTIONS AND ESTIMATED COST

A. Proposed Actions

1. Proposed action description

The objective of the removal action is to eliminate the threat of exposure through direct human contact caused by a release of hazardous materials at the Site. In order to remove and/or abate the asbestos and the PCB debris within the site buildings, the following actions are proposed.

- EPA will remove the contaminated wooden flooring blocks from within the site buildings in order to limit releases of hazardous substances and to facilitate access to areas of the building.
- EPA will remove the PCB debris (which is predominantly from broken PCB-containing light ballasts). This removal will be accomplished by vacuum trucks or by physical sweeping of the materials. Any movement of the material will be accomplished by wet sweeping techniques or using vacuums with High Efficiency Particulate Air (HEPA) filters. Materials accumulated from the cleanup will be containerized, pending sampling and off-site disposal.
- Once the areas of the facility are free from PCB contamination and debris impediments, asbestos abatement will occur.
- Asbestos abatement will involve the use of glove bags, containment structures, elevated boom lifts and asbestos encapsulant to abate. EPA will remove asbestos that is in poor condition. In the event some of the asbestos is in good condition, EPA will consider the use of asbestos encapsulant. Use of encapsulant will seal and bind the asbestos fibers that are contained within the pipe wrap that may become friable. Encapsulation may be necessary when asbestos is in good condition so that cleanup resources can focus on the poor condition asbestos.
- Air monitoring for fugitive dust emissions will also be conducted within the site buildings during the PCB and asbestos removal process.
- The building will be investigated for the presence of other drums and containers of hazardous materials that may be within the site buildings. These may include maintenance chemicals, paints, unknown materials within containers, empty drums and spent chemical containers. These materials will be placed into a consolidation area and separated by hazard classes.
- EPA will sample the accumulated waste materials as necessary. Any sampling conducted will follow EPA Quality Assurance/Quality Control (QA/QC) protocol. Disposal will occur for these materials once the container collection is complete.

migration of contamination via surface water drainage and windy conditions. Upon approval of this Action Memorandum, EPA will initiate the removal action as follows:

- Site security will be provided to prevent unauthorized access to the Site.

- To facilitate the logistics associated with the excavation and transportation and disposal ("T&D") of approximately 11,000 tons of contaminated soil; and the delivery of 5,000 tons of ¾" crushed stone, two of the four on-site buildings (i.e., warehouse and garage) will be demolished. The building debris will be segregated and disposed of off-site accordingly. The remaining two structures (i.e., office and baler control building) will be cleaned of gross contamination and secured against trespassers.

- Site features which are an impediment to the excavation activities (i.e., balers, crane, rail spur, and miscellaneous debris) may be decontaminated, removed, and disposed or recycled off-site. Wipe samples collected from the baling and compacting equipment revealed maximum PCB concentration of 15 $\mu g/100\ cm^2$. Trace levels of PCBs were detected in all of the buildings except for the office building at the north end of the Site. Removal of the two balers will include the removal of liquids and debris from within the associated baler pits, one of which is alleged to extend 30 feet below grade. Once the pits have been cleaned, they will be filled with crushed stone and the structures demolished to a depth of two feet below grade.

- The excavation of an estimated 11,000 tons of lead and PCB contaminated surface soils will be conducted to a depth of two feet below existing grade throughout the unpaved portions of the Site. Delineation sampling performed subsequent to the completion of the RSE, determined that the excavation of contaminated soils to this depth will accomplish an approximate 40% reduction in lead concentrations (pre-excavation average 8,370 ppm and post-excavation average 5,281 ppm). PCB concentrations will not be reduced (pre-excavation average 16 ppm and post-excavation average 22 ppm). The excavated soils will be removed in a manner which accomplishes the segregation of PCB contaminated soils (>50 ppm) which are regulated under the Toxic Substance Control Act.

- A dust control program including the application of a water fog and the installation of physical barriers will be initiated during all Site activities to control dust.

- Air monitoring will be conducted to monitor the effectiveness of dust suppression activities.

- Upon completing the excavation of contaminated soils, a visible barrier will be installed at the base of the excavation and the Site backfilled and re-graded with one foot of ¾" crushed stone. The existing contours of the Site will be maintained throughout the excavation and backfilling process to maintain established drainage patterns.

2. Contribution to remedial performance

The response measures proposed in this Action Memorandum will address the threat of direct contact to hazardous substances by the public. The proposed action will contribute effectively to any long term remedial action with respect to the release or threat of release of hazardous substances at the Site.

3. Description of alternative technologies

Alternative technologies have been considered in terms of whether the technology provides timely response and protection of human health and the environment. Due to the quantities and types of hazardous substances at the Site, on-site treatment and/or incineration is not appropriate. The planned removal action is appropriate based upon the criteria of effectiveness, implementability, and cost.

4. Engineering evaluation/cost analysis ("EE/CA")

Due to the time critical nature of this removal action, an EE/CA will not be prepared.

5. Applicable and relevant and appropriate requirements ("ARARs")

ARARs within the scope of this removal action, including the Resource Conservation and Recovery Act, Toxic Substance Control Act, and the Hazardous Materials Transportation Uniform Safety Act regulations that pertain to the disposal of hazardous wastes, will be met to the extent practicable. The Occupational Safety and Health Act regulations, that pertain to health and safety, will be met to the extent practicable.

6. Project schedule

The removal action will be initiated immediately upon approval of this Action Memorandum. It is expected that the removal action can be completed in approximately three months.

2. Contribution to remedial performance

The response measures proposed in this Action Memorandum address the immediate threat of direct contact to hazardous substances by the public. The proposed action contributes to any long-term action with respect to the release of threatened release of hazardous substances at the Site.

3. Description of alternative technologies

Alternative technologies were considered in terms of whether the technology provides timely response and protection of human health and the environment. The planned removal action was appropriate based upon the criteria of effectiveness, implement ability, and cost.

4. Engineering evaluation/cost analysis (EE/CA)

Due to the time critical nature of this removal action, an EE/CA was not prepared.

5. Applicable and relevant and appropriate requirements (ARARs)

ARARs within the scope of this removal action, including the RCRA, Toxic Substance Control Act, and the Hazardous Materials Transportation Uniform Safety Act regulations that pertain to the disposal of hazardous wastes, were met to the extent practicable. The Occupational Safety and Health Act regulations, that pertain to health and safety, were met to the extent practicable.

6. Project schedule

The removal action requested herein was initiated on August 27, 2007, as authorized by Regional Administrator Alan Steinberg's verbal authorization of a CERCLA removal action on August 23, 2007. The removal action was completed on January 2, 2008 when the scope of work for the action was completed and EPA's Emergency and Rapid Response Services (ERRS) contractor was mobilized for the implementation of OU3 remedial activities.

As part of OU-2 for the Site, EPA is in the process of completing the remedial design to address the remaining contaminated soils at the industrial park. Pursuant to the September 2004 ROD for OU-2 these soils will be excavated and treated on-site by low temperature thermal desorption (LTTD). The remedial design for this portion of the cleanup is anticipated to be completed within the next several months and activation of the LTTD is anticipated in the spring of 2009. The groundwater contamination will be addressed in OU-3. The areas of the Bound Brook located to the East of the Site and the wetlands in the southern portion of the property will not be addressed until OU-4.

Since 2007 periodic inspections have been conducted along the Bound Brook near the Site. PCB contaminated capacitors, capacitor parts, and wood blocks discovered during these inspections have been collected and secured in drums at the Site for future disposal. This debris has been previously laboratory analyzed indicating it contains extremely elevated levels of PCBs.

Containment of the PCB contaminated debris at the perimeter of the Site is proposed as an interim measure to protect public health, welfare, and the environment until a permanent remedy can be effected. The containment will prevent migration of the debris until the final remedial approach for these areas (OU-4) is selected and implemented by EPA. Geotextile will be installed to cover the capacitors, capacitor debris and PCB contaminated wood blocks until the permanent remedial action is implemented.

3. Description of alternative technologies

Alternative technologies will be considered, so long as they prove to be cost effective, efficient, and consistent with the NCP.

4. EE/CA

Because of the time-critical nature of this removal action, an EE/CA was not prepared.

5. Applicable or relevant and appropriate requirements (ARARs)

ARARs that are within the scope of this removal action, including State and federal requirements to eliminate the threats, will be complied with to the extent practicable.

6. Project schedule

The ~~time-critical~~ removal action will be initiated upon approval of this memorandum. Mobilization of Crew for the field activities to include the prevention of migration of capacitors, capacitor parts, and PCB contaminated wood blocks in the areas of the 3 culverts adjacent to the southeastern extent of the Site property, the area bordering the wetlands in the southeastern portion of the site, and the area of debris along the southwestern edge of the Site is expected to take approximately 6 weeks.

B. **Estimated Costs**

The estimated costs for the completion of this project are summarized below. A breakdown of Regional Removal Allowance costs are included as Attachment A.

Extramural Costs:

Direct Extramural Costs	Current Ceiling	Additional Funding Requested	Current Proposed Ceiling
Regional removal allowance costs	$332,000	$355,000	$687,000
20% Contingency	---	$70,000	$70,000
Total Regional removal allowance costs	$332,000	$425,000	$757,000
Other Extramural Costs Not Funded from the Regional Allowance	---	$30,000	$30,000
Total RST Costs	$22,000	$32,500	$54,500
Subtotal, Extramural Costs	$22,000	$62,500	$84,500
20% Extramural Cost Contingency	$21,000	$97,500	$118,500
TOTAL DIRECT EXTRAMURAL COSTS	$425,000	$585,500	$1,010,500

Intramural Costs:

Intramural Direct Costs	$50,000
Intramural Indirect Costs	$196,850
TOTAL, REMOVAL PROJECT CEILING	**$832,350**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

6. **Project schedule**

Approval of this Action Memorandum will allow for the completion of ongoing removal activities at the Site.

B. Estimated Costs

The estimated costs for the completion of this project are summarized below. A breakdown of Regional Removal Allowance costs is included as Attachment A.

Direct Extramural Costs	Current Ceiling	Additional Funding Requested	Current Proposed Ceiling
Regional Allowance Costs	$ 3,071,075	$ 1,000,000	$ 4,071,075
20% contingency	$ 464,215	$ 0	$ 464,215
Total ERRS Costs	$ 3,535,290	$ 1,000,000	$ 4,535,290
Other Extramural Costs Not Funded from the Regional Allowance			
Total RST Costs	$ 150,000	$ 0	$ 150,000
Subtotal, Extramural Costs	$ 3,685,290	$ 1,000,000	$ 4,685,290
20% Extramural Cost Contingency	$ 577,058	$ 0	$ 577,058
TOTAL DIRECT EXTRAMURAL COSTS	$ 4,262,348	$ 1,000,000	$ 5,262,348

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed action, or no action, could result in the further release of hazardous substances into the environment, exposing individuals who enter the Site to hazardous substances.

VIII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with the Site at the present time.

IX. ENFORCEMENT

The EPA has identified 35 potentially responsible parties (PRPs) for the Site. There have been no CERCLA Request for Information Letters or Notice of Potential Liability Letters issued to date.

EPA's Total Estimated Project-Related Costs

The total EPA cost for this removal action based on full-cost accounting practices that will be eligible for cost recovery is estimated to be $7,155,676 and was calculated as follows:

Cost Category	Amount
Direct Extramural Cost	$ 5,262,348
Direct Intramural Cost	$ 200,000
Subtotal Direct Costs	$ 5,462,348
Indirect Costs (Indirect Regional Cost Rate 31.00%)	$ 1,693,328
Estimated EPA Costs Eligible for Cost Recovery	$ 7,155,676

This estimate includes direct costs, which include direct extramural costs and direct intramural costs, and indirect costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with full cost accounting methodology which became effective on October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of the removal action. The estimates are for illustrative purposes only and their use in this Action Memorandum may not be relied upon by any third party as binding upon EPA. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

X. RECOMMENDATION

This decision document represents the selected removal action for the Tidewater Baling Site located in Newark, Essex County, New Jersey, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the Site.

If no action is taken or action substantially delayed, humans and the environment would be at risk of exposure to capacitors\capacitor parts that contain high levels of PCBs. Continued erosion of the Bound Brook banks will continue to expose additional capacitor material and wood blocks containing high levels of PCBs.

VII. OUTSTANDING POLICY ISSUES

No known outstanding policy issues are associated with this removal action.

VIII. ENFORCEMENT

To date, PRPs identified for the Site and served with notices of liability include DSC, CDE, Dana Corporation, Dana Corporation Foundation, and Federal Pacific Electric Company. Six (6) administrative orders have been issued to various PRPs for the performance of portions of removal actions required at the Site.

On or about March 25, 1997 EPA issued an Administrative Order (Index No.- II-CERCLA-97-0109) to the current owner of the Hamilton Industrial Park, DSC, which required that a removal action be performed that included measures to restrict access to certain areas of the Site and to implement certain engineering controls at the Site. The scope of work included paving facility driveways/parking areas/walkways, installing security fencing and warning signs to limit access to the property, and installing silt fencing to limit off-site migration of surface soils.

In July 1998, EPA offered the PRPs an opportunity to perform a Remedial Investigation and Feasibility Study (RI/FS), to help determine the nature and extent of contamination. After EPA and the PRPs were unable to agree on the scope of the RI required at the Site, EPA elected to perform the RI/FS using federal funds.

On August 6, 1998, CDE and DSC entered into an Administrative Order on Consent ("AOC") (Index No.- II-CERCLA-98-0115) for a removal action that included the removal and disposal of contaminated soil from five (5) residential properties, and delineation of the vertical and horizontal extent of PCB contamination in soil above 1 mg/kg at one (1) additional property.

Because of contamination found on residential properties, EPA expanded its investigation to Delmore Avenue and Hamilton Boulevard near the industrial park. Again, EPA determined that PCBs found in dust and soil posed a potential health concern for residents. EPA cleaned the interiors of eight (8) homes on Delmore Avenue and Hamilton Boulevard and entered into an AOC with CDE and Dana Corporation (Dana), another PRP, for removal of contaminated soil from seven properties. These removal actions were completed in January 2000.

On February 23, 1999, EPA entered into an AOC (Index #II-CERCLA-99-2006) with the former tenant and property owner of the Site, Cornell-Dubilier Electronics, Inc. and Dana Corporation, to conduct a removal action at seven additional residential properties.

On February 23, 1999, EPA entered into an AOC (Index No.- II-CERCLA-99-2006) with the former tenant and property owner of the Site, CDE and Dana Corporation, to conduct a removal action at seven (7) residential properties.

On April 28, 1999, a Participate and Cooperate Order (Index No.- CERCLA-02-99-2012) was issued to DSC and Federal Pacific Electric Company for the remediation of the same seven (7) properties that CDE and Dana Corporation entered into an AOC with EPA on February 23, 1999.

In April 2000, EPA entered into an AOC (Index No.- CERCLA-02-2000-2005) with DSC requiring the removal of PCB-contaminated soil from one additional property on Spicer Avenue. DSC agreed to perform the work required under the AOC, but subsequently failed to do so. In August2004, EPA began the removal of PCB-contaminated soil from this property, and the work was completed in September 2004.

On September 30, 2003, after EPA issued a ROD for OU-1 at the Site, EPA and several of the PRPs entered into negotiations regarding the performance by the PRPs of the Remedial Design and Remedial Action (RD/RA) for OU-1, under EPA oversight. EPA and the PRPs were unable to reach an agreement, and on August 24, 2004, EPA issued a Unilateral Administrative Order ("UAO") to DSC, CDE, and Dana, requiring them to perform the RD/RA for OU-1. On September 29, 2004, CDE and Dana informed EPA that they would not comply with the UAO. To date, DSC has not indicated whether it intends to comply with the UAO.

Enforcement Cost Estimate

Based upon full cost accounting practices, the total EPA cost for this removal action that will be eligible for cost-recovery are estimated to be $832,850, as follows:

EPA's Total Estimated Costs

See attached

Cost Type	Funding Requested in this Memorandum
Direct Extramural Costs	$585,500
Direct Intramural Costs	$50,000
Subtotal, Direct Costs	$635,000
Indirect Costs (Total Direct Costs x Regional Indirect Cost Rate- 31%)	$196,850
Estimated EPA Costs Eligible for Cost Recovery	$832,350

1,010,500

Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal

This Action Memorandum requests the authorization of an additional $1,000,000 in Direct Extramural funds, of which $1,000,000 is from the Regional advice of allowance for mitigation contracting. If approved, the total Direct Extramural project ceiling would be increased to $5,262,348, of which $4,535,290 would be for mitigation contracting. Please confirm your approval of the ceiling increase for the Tidewater Baling Site, as per delegation of authority, by signing below.

Approved: Alan J. Steinberg Date: 8-8-08

Alan J. Steinberg
Regional Administrator

Disapproved: _____ Date: _____

Alan J. Steinberg
Regional Administrator

cc: (after approval is obtained)
G. Pavlou, ERRD-AD
J. LaPadula, ERRD-DD
J. Rotola, ERRD-RAB
D. Harkay, ERRD-RAB
B. Grealish, ERRD-RAB
R. Basso, ERRD
C. Petersen, ERRD-NJRB
D. Karlen, ORC-NJSFB
W. Reilly, ORC-NJSFB
P. Brandt, PAD
R. Manna, OPM-FMB
T. Riverso, OPM-GCMB
T. Grier, 5202G
P. McKechnie, OIG
M. Pedersen, NJDEP
A. Raddant, USDOI
L. Rosman, NOAA
C. Kelley, RST